

WHAT IS CLAIMED IS:

1. A laser range finder, comprising:
 - an optical system which is one of monocular and binocular and has an erecting prism between an objective lens and an eyepiece;
 - a vibration isolation device which controls an attitude of an optical element constituting the optical system so as to be secured to an inertial system;
 - a sending portion which is provided on the vibration isolation device and emits laser light;
 - a receiving portion which is provided on the vibration isolation device and receives the laser light reflected by a target;
 - a measurement device which measures a time between when the laser light is emitted from the sending portion and when the laser light is received by the receiving portion; and
 - a calculation device which calculates a distance to the target based on the time measured by the measurement device..
2. A laser range finder, comprising:
 - a binocular optical system which has a pair of erecting prisms between a pair of objective lenses and a pair of eyepieces;
 - a vibration isolation device which controls attitudes of a pair of optical elements constituting the binocular optical system so as to be secured to an inertial system;
 - a sending portion which emits laser light through one optical element;
 - a receiving portion which receives the laser light reflected by a target through the optical element;
 - a measurement device which measures a time between when the laser light is emitted from the sending portion and when the laser light is received by the receiving portion; and
 - a calculation device which calculates a distance to the target based on the time measured by the measurement device.
3. A laser range finder, comprising:
 - an optical system which is one of monocular and binocular and has an erecting prism between an objective lens and an eyepiece;

a body frame to which the objective lens and the eyepiece are secured;

a vibration isolation device which rotatably supports the erecting prism on the body frame via a gimbals and controls an attitude of the erecting prism so as to secure the erecting prism to an inertial system;

a sending portion which is supported on the gimbals together with the erecting prism and emits laser light;

a receiving portion which is supported on the gimbals together with the erecting prism and receives the laser light reflected by a target;

a measurement device which measures a time between when the laser light is emitted from the sending portion and when the laser light is received by the receiving portion; and

a calculation device which calculates a distance to the target based on the time measured by the measurement device.

4. A laser range finder, comprising:

a binocular optical system having a pair of erecting prisms between a pair of objective lenses and a pair of eyepieces;

a body frame to which the pair of objective lenses and the pair of eyepieces are secured;

a vibration isolation device which supports the pair of erecting prisms on the body frame via a gimbals and controls attitudes of the pair of erecting prisms so as to secure the pair of erecting prisms to an inertial system;

a sending portion which is provided on the body frame and emits laser light;

a first optical path dividing device which is provided on the body frame and between one erecting prism and one eyepiece, transmits visible light, and reflects the laser light emitted from the sending portion to guide the laser light to the one erecting prism;

a second optical path dividing device which is provided on the body frame and between the other erecting prism and the other eyepiece, and separates the laser light reflected by a target from the visible light;

a receiving portion which is provided on the body frame and receives the laser light separated by the second optical path dividing device;

a measurement device which measures a time between when the laser light is emitted from the sending portion and when the laser light is received by the receiving portion; and

a calculation device which calculates a distance to the target based on the time measured by the measurement device.

5. A laser range finder, comprising:

an optical system which is one of monocular and binocular and has an erecting prism between an objective lens and an eyepiece;

a body frame to which the objective lens and the eyepiece are secured;

a vibration isolation device which rotatably supports the erecting prism on the body frame via a gimbals and controls an attitude of the erecting prism so as to secure the erecting prism to an inertial system;

a sending portion which is supported on the gimbals together with the erecting prism and emits laser light;

an optical path dividing device which is provided on the body frame and between the erecting prism and the eyepiece, and separates the laser light reflected by a target from visible light;

a receiving portion which is provided on the body frame and receives the laser light separated by the optical path dividing device;

a measurement device which measures a time between when the laser light is emitted from the sending portion and when the laser light is received by the receiving portion; and

a calculation device which calculates a distance to the target based on the time measured by the measurement device.

6. A laser range finder, comprising:

an optical system which is one of monocular and binocular and has an erecting prism between an objective lens and an eyepiece;

a body frame to which the objective lens and the eyepiece are secured;

a vibration isolation device which supports the erecting prism on the body frame via a gimbals and controls an attitude of the erecting prism so as to secure the erecting prism to an inertial system;

a sending portion which is provided on the body frame and emits laser light;

an optical path dividing device which is provided between the erecting prism and the eyepiece, transmits visible light, and reflects the laser light emitted from the sending portion to

guide the laser light to the erecting prism;

a receiving portion which is supported on the gimbals together with the erecting prism and receives the laser light reflected by the target;

a measurement device which measures a time between when the laser light is emitted from the sending portion and when the laser light is received by the receiving portion; and

a calculation device which calculates a distance to the target based on the time measured by the measurement device.